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Slow adoption of PPPs in developing countries: Survey of Nigerian Construction professionals

AbdulGaniyu Otairu[a]*, Abdullahi A. Umar[b], Noor Amila Wan Abdullah Zawawi[b], Mahmoud Sodangi[c], Dabo B. Hammad[b]

[a]*Insitu-Holmes Ltd, Suite C-59, 2nd floor IDE plaza Utako Abuja, Nigeria*
[b]*University Technology PETRONAS, Bandar Seri Iskandar 31750 Tronoh Perak, Malaysia*
[c]*Universityof Dammam, Saudi Arabia*

Abstract

The growth and development of any nation is greatly dependent on the availability of basic public infrastructure and services. The public Private Partnerships (PPP) has been in use for almost two decades helping developed countries improve their infrastructure stock to achieve their economic goals. Despite the link between infrastructure availability and economic growth, developing countries are yet to achieve adequate infrastructure provision to assist their quest for economic growth. Therefore, this study set out to determine the reasons for the slow adoption of the PPP procurement strategy in Nigeria through a survey of construction professionals. It was found that corruption in government was the major problem. Factor analysis further revealed five factors namely Government policy on infrastructure, Lack of consensus among policy makers, Political instability, Lack of understanding of the PPP concept, and High participation costs.

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Keywords: PPP; infrastructure; public procurement;Nigeria;Developing countries.

* Corresponding author. Tel.: +2348035965317
E-mail address: rigatab@yahoo.com

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1. Introduction

Public private partnerships (PPP) or Private Finance initiatives (PFI) as it is known in some countries has become the 'silver bullet' with which governments across the globe solve their infrastructure problems. The practice has been widely accepted to the extent that whole local government services were contracted to the private sector in Denmark's Farum local government [1]. International financial institutions like the World Bank and IMF have also used it as a loan condition while donor agencies like the EU, USAID and DfID employ it as condition for aid [2].The impetus for the adoption of PPP resulted in part due to the failure of civil servants to effectively deliver and maintain public services and corruption in public procurement. In developing countries, the main driver for private participation has been the inability of tax revenue to close the financing gap for infrastructure needs. Private provision is also argued to provide better value for money and leads to benefitting from private sector management expertise [3]. While literature tends to treat Privatization and PPP as two separate forms of infrastructure provisions, one good differentiating factor between the two is the presence of a regime of state price regulation [4]. However, in most regions, the use of the term privatization evokes memories of everything that is wrong with private involvement in infrastructure; hence governments have become fearful of using the word privatization[5]. Public Private Partnerships is a partnership that leverages private funding and the strengths of private entrepreneurship and management, for the maximum provision of public services in a climate of scarce resources. PFI is a PPP special case where all the finance needed for the capital funding and its basic operation is supplied by the private sector in return for a service charge[6]. This public procurement strategy has grown so fast that over 45 agencies and units have been created worldwide to specifically deal with PPP related contracts[7]. Multi-lateral institutions also have dedicated agencies delegated to oversee PPP issues, for instance PPIAF for the World Bankand EPEC for the European Union. In the UK, where contemporary literature attributes the evolution of PPP in 1992, over 717 contracts have been signed to date[8] and they still remains the largest PPP market globally [9]. However, despite being used as a condition for loans by international financial institutions, and condition for Aids by donor agencies, there has been a slow move towards this infrastructure provision strategy in developing countries. Therefore this paper, reporting the results of a survey, seeks to uncover the major reasons for this slow adoption and possible solutions from the view point of construction professionals working in public and privatesectors in Nigeria.

2. Potentials of public private partnerships

The private sector has always been in co-operation with the public sector for the provision of public infrastructurein the areas of road construction, railways, and buildings as contractors. In terms of consultancy, the private sector has also been very active in the area of consulting for the public sector. However, with population explosions in most developing countries over the last two decades due to improved healthcare technologies, there arose a competition from other sectors of the economy for the meager tax revenues accruing to governments. Governments in response have sought to seek alternative means of financing the much needed infrastructure while ensuring that it fulfills its other numerous responsibilities to its citizens, hence the move towards PPPs. Therefore, it could be said that the most important reason till date for the adoption of the PPP strategy in both developed and developing economies was solely constraint on government revenue [10]. Although the practice of PPP or concessions has been used in the past for the Perrier brothers' concession in Paris and the Suez Canal, the rationale for their use then was not stated or espoused. However, in recent years the PPP has been attributed with many positive benefits which include creating a private sector-led economy,hastening development, reducing project life-cycle costs, promoting national economic growth and improving national infrastructure[11]. It is also said to deliver better value for money than the traditional procurement [12], and aids in the transfer of technological knowledge to local enterprises [13]. The PPP is also a response to the rising marginal cost of state funded investments in public services imposed by global capital markets [14]. Most importantly, the PPP has been found to help improve on the management of the twin risks of time and cost overruns better than the traditional procurement method [6]. As noted by National Audit Office in its report 'Construction Performance', it showed

that the PPP performs better than the traditional procurement route interms of cost and time certainty as expressed in table 1below:

Table 1: Savings from the PFI Source: [15]

	Previous experience (modernizing construction 1999)	PFI experience (2002 NAO Census)
Construction projects where cost to the public exceeds price agreed at contract	73%	22%
construction projects delivered late to public sector	70%	24%

Furthermore, the PPP has helped countries reduce their bureaucratic burden as staff are transferred to the private sector once they take over provision of services in any sector. To this extent, in malaysia for example, 113,440 have been transferred from the government's balance sheetto the private sector with an accompanying savings of RM7.79 billion annually on operating expenditure or $200 billion in 25 years; and RM161 billion in capital expenditure. In the UK also, over 35,000 staff were transferrd to the private sector through PPP deals [16]. The degree to which this procurement strategy has been employed globally has areached a scale which is big enough to have macroeconomic and systemic significance in a number of countries [17]. Despite these espoused benefits of adopting PPPs, many African countries and Nigeria in particular have found it difficult to make any progress in this respect.

2.1. Growth factors for PPP in developing countries

Although the PPP has been touted as being an efficient tool for infrastructure improvement across all sectors, like any good concept, it has its short-comings. The market for PPP procurement strategy has grown over the years that in 2004, 205 national PPP contracts were signed worldwide involving $52 billion [18]. But given the fact that one of the major reasons for this strategy is the constraint on public sector revenues, it is not expected that resource rich counries like Nigeria would find PPPs attractive. However, Nigeria has been struck by the 'Dutch Disease', which is a condition where a significant portion of citizens in a resource rich country suffer more than countries without any resources. Nigeria's national earnings from oil and gas have risen tremendously over the last three decades, from 26.3% in 1970 to 83.5% in 2000[19]; but public services and infrastructure have also been deteriorating fast in the opposite direction. Awarded contracts have either been bedeviled by the twin curse of time and cost overruns or are clearly abandoned by contractors due to non-payments by government. Under this condition, the PPP seem to be a very effective tool to overcome these anomalies. However, in order to implement a successful PPP process, there are pre-requisites which must be on ground to facilitate the process; top among them is the availability of competent construction contractors in a countries' construction industry. The range of tasks undertaken before final service provision requires the construction of an asset before service delivery [20]. In a recent study of the critical success factors for PPPs in Nigeria, it was found that PPP legislation, cost-benefit analysis and creating the right environment were critical for PPP success [21]. In the transport sector, it has been argued that legislation, regulation, creating conducive environment, forging partnerships with the private sector and other stakeholders in policy formulation, reform and implementation were critical success factors in urban transport PPP in Nigeria [22].Financial institutions in Nigeria were also assessed on their PPP risk bearing capacity and were found to be risk-averse and would rather seek to transfer risks to other parties [23]. However, beyond risk transfer, the business environment and legislations, there are a number of other requirements needed for PPPs to thrive.

Political stability is an essential factor in any development process, and this happens to be one of the most distinguishing factors between developing and developed countries. Political stability does not mean the absence of violence alone; it also includes program continuity,which is responsible for development failures in developing countries. Too often, new leadership tends to see discontinuing the previous government's programs as their first act in office [24] thereby creating additional risks for PPP investors. Following on political stability, there is a need to have strong local banks able to finance large scale infrastructure projects alone or in conjunction with external

lenders. Usually, the consortium is a collection of different investment stakeholders which include a bank or group of banks providing debt for the construction and operation of the facilities[25]. Having local banks is important to build a good public support base for the projects. In China for instance, foreign firms or international financial institutions rather than domestic institutions that have been involved in PPP projects [26]. Government policy has been shown to be one of the most important pre-requisites for the success of PPP, and apart from policy support, government can also assist through providing a capital subsidy in the form of one-time grant or jointly sharing some portion of the capital investment [25]. In Malaysia for instance, the government has put in place anRM20billion Facilitation Fund (FF) to assist PPP investors wishing to invest in certain critical sectors of the economy. Other forms of support may include interest rates policy, tax breaks and creation of an 'independent' and credible regulatory environment that will boost investor confidence[27]. Guaranteeing demand, allowing automatic cost-pass through in energy pricing, and assuming foreign exchange risks are also some of the ways government policy can help encourage investors.

Although PPP is not a panacea for solving all the problems of the construction industry and infrastructure in particular, but its emphasis on the use of risk management, value management, integrated design and construction, life-cycle costing, and collaborative relationships; makes it an exceptional form of procurement. Large complex mega projects, due to their huge investments require a lot of contractual safeguards to protect both parties to the contract from exploitation by either party, more often than not there will be points of ambiguity or even disagreement between them [28]. However, the availability of outlets for dispute resolution which are seen to be credible and respected by all parties goes a long way in inducing private investments in infrastructure.

A careful plan is required by a host government in the course of deciding to enter into a PPP contract. This plan should properly assess the presence of competing publicly financed projects which might affect the demand for the privately financed one. Instances have occurred where government sought to generate demand for a privately financed toll road by closing a publicly financed one to traffic in Australia. The response to such actions by government especially in developing countries, where tolls are unpopular, cannot be correctly predicted in advance. The protests that were generated from tolling on the Skye toll bridge in the UK and the Vasco Da Gama Bridge in Portugal are good examples of public outrage to tolls. Consequently public support has been shown to be crucial for PPP and any other public project [29]&[30]. Although, PPP promised improved efficiency, social benefits and lower levels of corruption [31]; critics have often suggested that it is a controversial and problematic approach to capital development in the public sector (Raune, 2000) cited in [13]. This is because it involves large expatriate companies executing projects that are overpriced in their opinion. Also in a recent survey to determine the benefits that have been achieved using the PPP model, the elimination of corruption was the least ranked benefit suggesting that PPPs have evolved their own channels of corruption [32]. Furthermore, [33] also found that private providers in the UK health sector were making profits in excess of the agreed levels.

Although, there is no fool-proof technique in crafting a successful PPP [34], the long duration associated with PPP contracts require a clear procurement policy with provision for changes, resolving disputes, risk management, contract pricing, performance incentives and exit strategies [3]. Other barriers to the growth of PPP that have been identified include inadequate public sector expertise in planning and implementing PPP projects [35], [36] and [37]. Financing, operating, maintaining and investing in long-term assets are not familiar activities to construction contractors[13] and [38]. Existing public sector employees responsible for the delivery of public sector projects are also complicit in the slow growth of the PPP as they percieve it as a threat to their continued employment. Complicating issues further is the huge diversity of tribes across many of the countries in sub-saharan Africa, this diversity rather than be a source of strength, is often a recipe for competition among policy makers wishing to please their people. Government failures may also occur in the many cases in which politicians, bureaucrat, and the individuals or groups who influence them give priority to their own private interests rather than the public interest [39].

Finally, the high cost of participation hasalso resulted in decreasing the number of willing project companies. Bidding costs have been estimated to be a little below 3 % of the estimated final cost of projects [12] and 5-15% of construction cost for consultants on a single PPP project (p.173), which is high going by the size and costs of most PPP projects. The author goes further to reveal that the bidding costs on the london underground was in the area of £300 million. However, compensation is now being recommended where work is required in the detailed design stages of several bidders so that it would encourage them to submit proposals when next they are called upon [6].

3. Methodology

In total, about 14 barriers to the growth of PPPs were identified from literature and a questionnaire was designed based on these. In order to gather data for this study, 100 postal questionnaires where sent out to construction professionals working within the country's capital city Abuja. The selected respondents comprise Architects, Engineers, Quantity Surveyors, Project managers and contractors. One of the guiding factors for choosing this city is because it is the seat of government and these professionals being in the same city interacts with the government through contracts and consultancy works. Therefore, they are in a position to be better informed than their counterparts in other states in Nigeria. The respondents were asked to rate the factors they considered responsible for the slow adoption of PPPs Nigeria on a 5-point likert scale. The scale was designed with 1 being strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree. A total of 61 questionnaires were returned representing 61% valid responses which is comparable with the 60 responses upon which [40] based their analysis. IBM SPSS statistical software version 20 was used to analyses the responses and draw inference.

4. Results and Discussions

From the data collected, it was found that, among the respondents, there were 31 public sector employees and 30 private sector employees. In terms of professional affiliations, 8 respondents were Architects, 22 were Engineers, 14 were Quantity Surveyors, 7 were project managers, 2 were contractors and 8 covered other professions like town planners, estate managers etc. The respondent's academic qualifications show that 5 had PhD degree, 20 had M.Sc./MBA, 27 had B.Sc., and 8 had a Diploma while 1 had 'other' certificate type. The respondents' years of experience were also assessed to determine their suitability to be credible respondents. From their responses, 15 had about 3 years of experience, 16 had about 6 years of experience, and 10 had about 10 years of experience while 20 had over 11 years of experience. From the profile of the respondents, it can be seen that they are qualified to give valid opinion on the subject matter with about 75% having over 5 years industry experience, 85% having a degree and all the respondents were professionals in the various construction disciplines. The reliability test conducted to determine the internal consistency of the measuring instrument returned a Cronbach's alpha coefficient of α=.776. A minimum Cronbach's alpha coefficient of .70 is recommended [41] . As for the validity of the measuring instrument, it is simply the square roots of the reliability co-efficient [42] p.294; hence the validity for this data is .881. He went on to affirm that validity is the quality of a test such that it measures what it says it does (p.389).

A test of normality was conducted on the data to determine the type of distribution and it returned a sig. value of p>.05 for Kolmogorov-Smirnov and p=.254 for Shapiro-Wilk. The results suggest that the distribution is not different from a normal distribution. Although the Kolmogorov-Smirnov test values were close to being significant, the Shapiro-Wilk is a more powerful test [43]. From the above results, all other subsequent tests will be limited to parametric procedures. To test whether there was a difference in opinion across sector, the *t*-test for independent means was conducted to compare private and public sector perceptions. The *t*-tests allow the comparison of the means of two normally distributed populations using samples drawn randomly and independently from each other [44].The *t*-test indicated that the means did not differ significantly at p =.107. The result suggests that there is no difference in ranking across both sectors on the causes of slow PPP adoption in Nigeria. It is a good thing that both sectors agree on what the problem is and this would make it easier to arrive at a consensus solution.

Further tests were conducted using Analysis of Variance (ANOVA) which compares the means of more than two independent groups [41]. The parameters compared includeprofessional disciplines, qualifications and years of practice in the industry. The results for ANOVA on professional disciplines (p =.421) reveals that there was no statistically significant difference across professions in their perception of causes of slow growth of PPPs in Nigeria. There was also no statistically significant difference (p=.208) when comparison was based on qualifications. And a further comparison based on the number of years of industry experience also suggests that there was no significant difference (p =.069) as a result of the respondent's years of industry experience. These results bode well for developing countries and especially Nigeria where the respondents are based. This is because

having a consensus on the main reasons for the slow uptake of PPPs is a first step towards identifying how to overcome the problems. Using the mean score of the various variables to rank the causes reveals that 'corruption in government' is the most severe cause of slow PPPs adoption in Nigeria as shown in table 2 below:

Table 2: Mean Score Ranking of Barriers to PPPs

	Barriers to PPPs	Mean Score
1	Corruption in government	4.55
2	Government policy on infrastructure	3.92
3	Policy makers lack of consensus	3.85
4	Lack of security	3.78
5	High participation cost	3.57
6	Political instability	3.40
7	Absence of strong financial institutions	3.27
8	Absence of a clear contract	3.20
9	Inefficient construction industry	3.12
10	Lack of understanding of PPP concept	3.07
11	Ineffective & respectable judiciary	3.05
12	Absence of public support	2.92
13	Fear of unemployment	2.88
14	Presence of competing project	2.68

'Government policy on infrastructure' was ranked in second place by the respondents and this re-echoes the assertions of [27]that government policy has a great influence on the success of large infrastructure PPPs. In third place is 'lack of consensus among policy makers', this is especially true for Nigeria with very diverse ethnic groups amidst a population of about 160 million people. The upper and lower legislative houses of parliament has about 469 parliamentarians all representing different ethnicities and tribes. Lack of adequate security ranked in fourth place. This is understandable as kidnapping of foreign construction executives in return for huge ransoms has become a means of livelihood for the growing number of unemployed graduates. Foreign investors are wary of working in certain parts of the country; it is an issue of concern to everyone. 'High participation cost' was ranked in fifth place.

'Lack of understanding of PPP concept', which is a problem that has bedevilled even those in developed countries was ranked in faraway tenth place. The lack understanding of the concept has been referred to by [35], [36] and [37]. However, given the importance of the construction industry to the success of PPPs, it is surprising that 'inefficient construction industry' did not rank very high among the variables. A possible explanation for this could be because the respondents are all involved in the construction industry, ranking 'inefficient construction industry' high would be like passing a negative verdict on their capacity. Also, despite the strong consensus among researchers on the importance of public support to PPPs [29]&[30], it is surprising that 'absence of public support' was ranked so low in 12th place. However, one of the reasons this might have happened would be because of the scant PPP experience among Nigerian construction professionals and the country at large.

Finally, a factor analysis was performed on the data. Factor analysis is a data reduction technique which takes a large set of variables and summarizes them using a smaller set of factors or components [41]. After performing the factor analysis procedure, it returned 5 factors; these were further rotated in order to enhance interpretability of the components[44]. The factors were then named using the component with the highest loading values in each case, therefore, the factors responsible for the slow growth of PPPs according to this study include:

1) Government policy on infrastructure
2) Lack of consensus among policy makers
3) Political instability

4) Lack of understanding of the PPP concept
5) High participation costs

5. Conclusions

The PPP infrastructure procurement strategy is an effective tool for the procurement of public infrastructure in the presence of public sector financial constraints. It is a suitable infrastructure provision strategy for countries constrained by tax revenue with which to provide infrastructure to sustain economic growth. This study sought to determine the causes for the slow adoption of PPPs in developing countries with focus on Nigeria. While the results show that corruption in government was a major cause, factor analysis has shown that there are five main factors responsible for the slow uptake of PPP. Another interesting finding from this study is that there is a consensus among construction professionals across both sectors on the barriers to adopting PPPs. This convergence, it is hoped would make for easy dialogue in charting the way forward for infrastructure provision in Nigeria. Although the study sample may not be large for effective generalization of the results, most countries in sub-Saharan Africa bear similar characteristics. Therefore, developing country governments wishing to improve their stock of infrastructure through the PPP strategy must fight corruption in public procurement first before it can succeed in its quest to establish successful PPPs. Finally, governments should review their infrastructure policies to encourage private investors while at the same time creating opportunities for training on PPP procurement for its staff.

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